

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL WITH STREET LIGHTING AT THE INTERSECTION OF MD 355 AND KING FARM BLVD. IN MONTGOMERY COUNTY. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE TRAFFIC SIGNAL WILL OPERATE IN A NEMA SIX-PHASE, SEMI- ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 355. ALTERNATE PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE SOUTH AND WEST LEGS OF THE INTERSECTION.

CONTROLLER REQUIREMENTS

INSTALL A NEMA EIGHT-PHASE, FULLY ACTUATED CONTROLLER WITH SIX, 4-CHANNEL TIME-DELAY-OUTPUT LOOP HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET.

EQUIPMENT LIST

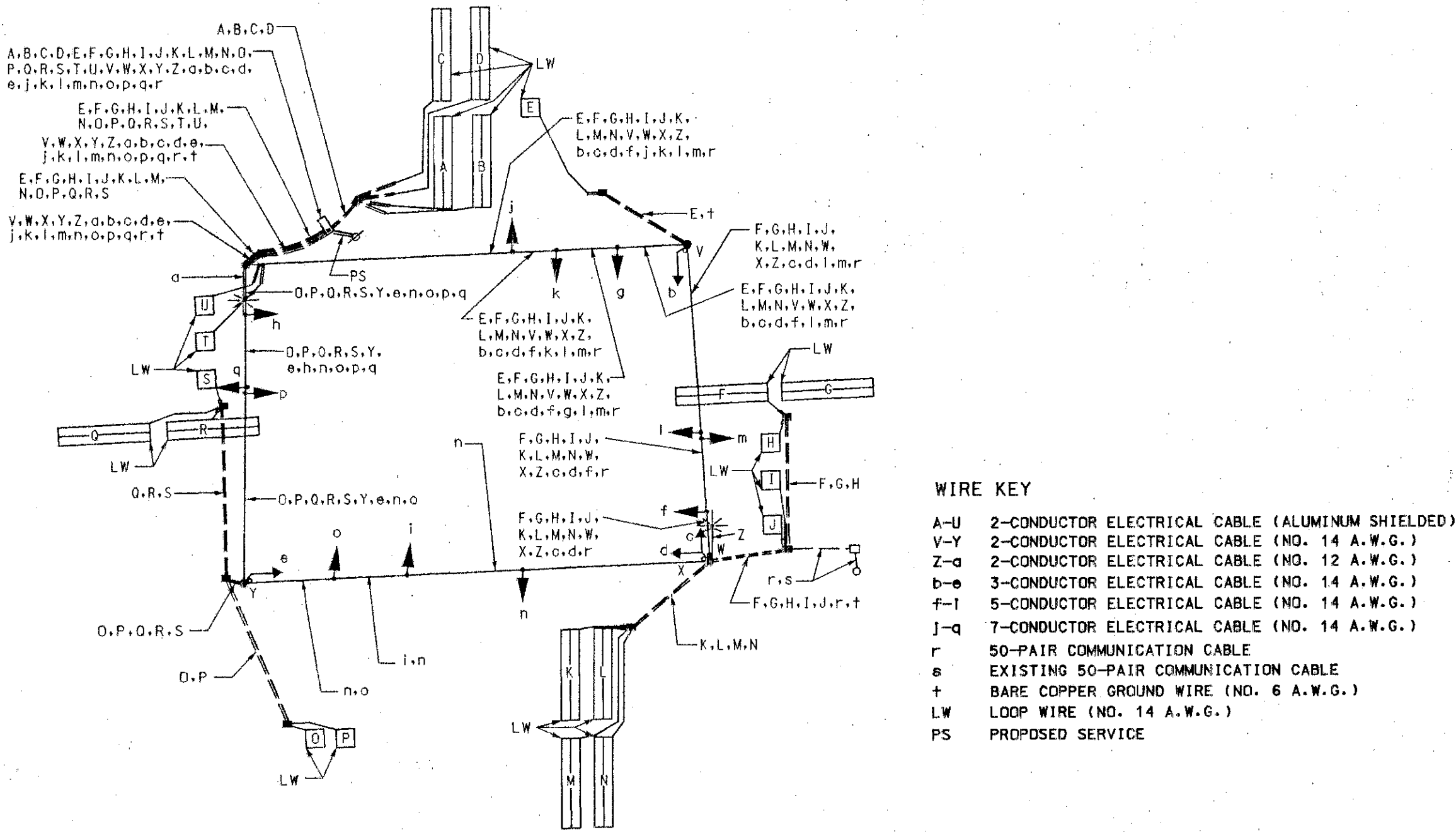
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR


ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	5 CY	TEST PIT EXCAVATION
5002	30 LF	5 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5003	400 LF	12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5004	180 LF	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	16 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTER
5006	6 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
8001	14 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8004	4 EA	FURNISH AND INSTALL 12 IN. X 30 FT. STEEL STRAIN POLE
8009	580 LF	FURNISH AND INSTALL 3/8" STEEL SPAN WIRE
8010	580 LF	FURNISH AND INSTALL 1/4" STEEL SPAN WIRE
8021	1550 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8023	130 LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8027	210 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8030	40 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8031	110 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	9 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	5 EA	FURNISH AND INSTALL 3/4" X 10' GROUND ROD
8040	6000 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8041	5800 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8042	1250 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
8043	1250 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
8044	130 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	1700 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	440 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.) TRAY CABLE
8048	120 LF	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
8049	45 EA	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 A.W.G.)
8050	265 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS - 4" X 6"
8055	2 EA	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE
8056	2 EA	FURNISH AND INSTALL 10' LIGHTING BRACKET ARM
8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
-----	2 EA.	FURNISH AND INSTALL 8" ONE-WAY, THREE-SECTION (R,Y,G) TRAFFIC SIGNAL HEAD - SPAN WIRE MOUNT
-----	5 EA.	FURNISH AND INSTALL 12" ONE-WAY, THREE-SECTION (R,Y,G) TRAFFIC SIGNAL HEAD - SPAN WIRE MOUNT
-----	3 EA.	FURNISH AND INSTALL 12" ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD - SPAN WIRE MOUNT
-----	2 EA.	FURNISH AND INSTALL 8"/12" ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD - SPAN WIRE MOUNT
-----	2 EA.	FURNISH AND INSTALL 12" ONE-WAY, TWO-SECTION (WK,DW) PEDESTRIAN SIGNAL HEAD - POLE MOUNT
-----	1 EA.	FURNISH AND INSTALL 12" TWO-WAY, TWO-SECTION (WK,DW) PEDESTRIAN SIGNAL HEAD - POLE MOUNT
-----	2 EA.	FURNISH AND INSTALL R10-12 SIGN (36" X 42") - SPAN WIRE MOUNT
-----	2 EA.	FURNISH AND INSTALL R3-SR SIGN (30" X 36") - SPAN WIRE MOUNT
-----	1 EA.	FURNISH AND INSTALL D3-2 DUAL FACED "KING FARM BLVD" SIGN (VAR X 16") - SPAN WIRE MOUNT
-----	1 EA.	FURNISH AND INSTALL D3-2 DUAL FACED "METRO STATION" SIGN (VAR X 16") - SPAN WIRE MOUNT
-----	1 EA.	FURNISH AND INSTALL SHIELD ASSEMBLY NORTH/MD 355/LT. ARROW" SIGN (36" X 75") - POLE MOUNT
-----	1 EA.	FURNISH AND INSTALL SHIELD ASSEMBLY SOUTH/MD 355/LT. ARROW" SIGN (36" X 75") - POLE MOUNT
-----	1 EA.	FURNISH AND INSTALL SHIELD ASSEMBLY NORTH/MD 355/RT. ARROW" SIGN (24" X 51") - POLE MOUNT
-----	1 EA.	FURNISH AND INSTALL SHIELD ASSEMBLY SOUTH/MD 355/RT. ARROW" SIGN (24" X 51") - POLE MOUNT
-----	6 EA.	FURNISH AND INSTALL R3-7R SIGN (30" X 30") - GROUND MOUNT
-----	2 EA.	FURNISH AND INSTALL R4-7 SIGN (36" X 48") - GROUND MOUNT
-----	2 EA.	FURNISH AND INSTALL W3-3 SIGN (48" X 48") WITH "NEW" PANEL (24" X 24") AND D3-2 (VAR. X 24") - GROUND MOUNT
-----	4 EA.	PAINT STRAIN POLE - FEDERAL STANDARD GREEN COLOR #14036
-----	470 LF	FURNISH AND INSTALL 50 PAIR COMMUNICATION CABLE
-----	4 EA.	FURNISH AND INSTALL PEDESTRIAN PUSHBUTTON WITH R10-4C SIGN
-----	1 EA.	FURNISH AND INSTALL 8-PHASE CONTROLLER IN A NEMA SIZE '6' BASE MOUNTED CABINET (MONTGOMERY CO. STD.)
-----	3 EA.	FURNISH AND INSTALL FOUR-CHANNEL TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIER
-----	1 EA.	BAND EXISTING SIGN TO STRAIN POLE

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1 & 5 CHANGE	PHASE 1 & 5 CHANGE MAY CHANGE TO PHASE 1 & 6, 2 & 5 OR 2 & 6															
PHASE 1 & 6	G	G	G	R	R	R	R	R	R	R	R	R	R	DW	DW	DW
1 & 6 CHANGE	Y	Y	Y	G	R	R	R	R	R	R	R	R	R	DW	DW	DW
PHASE 2 & 5	R	R	R	R	G	R	R	R	R	R	R	R	R	DW	DW	DW
2 & 5 CHANGE	R	R	R	Y	Y	G	R	R	R	R	R	R	R	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	R	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW
PHASE 2 & 6 ALT.	G	G	G	G	G	G	R	R	R	R	R	R	R	WK	WK	DW
PED. CLEAR	G	G	G	G	G	G	R	R	R	R	R	R	R	FL/DW	FL/DW	DW
2 & 6 ALT. CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	G	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW
PHASE 4 ALT. & 8	R	R	R	R	R	R	G	G	G	G	G	G	G	DW	DW	WK
PED. CLEAR	R	R	R	R	R	R	G	G	G	G	G	G	G	DW	DW	FL/DW
4 ALT. & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK

WIRING DIAGRAM



REVISIONS		APPROVALS		<div> <b>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</b> <i>Office of Traffic &amp; Safety</i> <b>TRAFFIC ENGINEERING DESIGN DIVISION</b> GENERAL INFORMATION SHEET MD 355 AND KING FARM BLVD.</div>	
		TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION			
		ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION			
		CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION			
		DIRECTOR, TRAFFIC & SAFETY		DRAWN BY: T.M.Z	
				CHECKED BY: K.W.S	
				SCALE: NONE	
				DATE: 2-23-00	
				F.A.P. NO.	
				S.H.A. NO.	
				COUNTY: MONTGOMERY	
				LOG MILE:	
				TS NO. 3990	
				T.I.M.S. NO. D402	
				SHEET NO. 2 OF 2	